

#1164
Amend B
4.2.04

Please amend claims 1, 3, 5, 9, 10, 14, and 19 and add new claims 21-25 as follows:

Claim 1. (Amended) A data carrier comprising:
receiving means for receiving a modulated carrier signal which contains an encoded data signal,
demodulation means for demodulating the received modulated carrier signal and for outputting
the encoded data signal contained therein,
decoding means for decoding the encoded data signal and for outputting data,
data processing means for processing the data output by the decoding means,
the decoding means including at least a first decoding stage and a second decoding stage, the
first decoding stage being arranged to decode ¹¹² said data signal encoded in conformity with a first
~~encoding~~ decoding method whereas the second decoding stage is arranged to decode said data
signal encoded in conformity with a second ~~encoding~~ decoding method, and
~~a decision stage included in said decoding means and which is arranged to decide which of the~~
~~decoding stages is suitable to decode said data signal; and wherein before the decision stage can~~
~~decide which of the decoding stages is suitable for the decoding of said data signal, data output~~
~~by the first decoding stage can be output to the data processing means for further processing;~~
wherein said first decoding method is RTZ and the second decoding method is Miller.

↑ spellout

Claim 2. (Canceled)

Claim 3. (Amended) A data carrier as claimed in Claim 1, ~~wherein the~~ further comprising a
decision stage capable of receiving decision supporting information from at least one
of the at least two decoding stages, and that the decision stage is arranged to decide, by
evaluation of the decision supporting information applied thereto, which of the at least two
decoding stages is suitable to decode a received encoded data signal.

Claim 4. (Not Amended) A data carrier as claimed in Claim 1, wherein the encoded data signal
includes decoding stage instruction information and the decision stage is arranged to decide, by
evaluation of the decoding stage instruction information applied thereto, which of the decoding

stages is arranged to decode the encoded data signal.

Claim 5. (Amended) A data carrier as claimed in Claim 1, wherein the decoding means includes a storage stage in which the encoded data signal can be stored prior to ~~the decoding by one of the~~ at least two decoding stages being read out by the data processing means.

Claim 6. (Canceled).

Claim 7. (Not Amended) A data carrier as claimed in Claim 1, further comprising an encoding means for outputting an encoded data signal, said encoding means including at least a first encoding stage and a second encoding stage.

Claim 8. (Not Amended) A data carrier as claimed in Claim 7, wherein said first encoding stage is designed to encode data in conformity with a third method and said second encoding stage is designed to encode data in conformity with a fourth method which is different from said third method.

Claim 9. (Amended) A data carrier as claimed in Claim 1, further comprising modulation means designed to modulate the encoded data signal output by the encoding means. *OK? by demod. means??*

Claim 10. (Amended) A data carrier comprising:
a receiver designed to receive a modulated carrier signal which includes an encoded data signal;
demodulator capable of receiving the modulated carrier signal and designed to output the encoded data signal included therein;
decoder designed to decode the encoded data signal and to output data;
data processor designed to process the output data from the decoder; and
wherein the decoder includes a first decoding stage and a second decoding stage, the first decoding stage designed to decode the encoded data signal which is encoded in conformity with a first encoding method and the second decoding stage designed to decode the encoded data

signal encoded in conformity with a second encoding method, wherein said first encoding method is RTZ and second encoding method is Miller; and
~~said decoder further including a decision stage which is designed to determine which of the first and second decoding stages is suitable to decode the encoded data signal, wherein said data may be output by the first decoding stage to the data processor before the decision stage determines which of the first and second decoding stages is suitable for decoding of the encoded data signal.~~

Claim 11. (Canceled).

Claim 12. (Canceled)

Claim 13. (Not Amended) The data carrier of claim 10, wherein the data is output to the data processor before ¹¹²the decision stage determines which of the first and second decoding stages is suitable for decoding the encoded data signal.

Claim 14. (Amended) A method comprising:

receiving a modulated carrier signal having an encoded data signal;

demodulating the modulated carrier signal in a demodulator and outputting the encoded data signal contained therein to a decoder;

decoding the encoded data signal and outputting data to a data processor;

processing the data output by the decoder;

wherein the decoding step includes a first decoding stage which decodes the encoded data signal in conformity with a first encoding decoding method and a second decoding stage which decodes the encoded data signal in conformity with a second encoding decoding method, wherein the first decoding method is RTZ and the second decoding method is Miller; and

wherein the decoding step further includes a decision stage which determines which of the first and second decoding stages is suitable to decode the encoded data signal ~~and data may be output by the first decoding stage to the data processor before the decision stage decides which of the first and second decoding stages is suitable for the decoding of the encoded data signal.~~

Claim 15. (Cancelled)

Claim 16. (Not Amended) The method of claim 14, wherein the data is output by the first decoding stage to the data processor before the decision stage decides which of the first and second decoding stages is suitable for the decoding of the encoded data signal.

Claim 17. (Not Amended) The method of claim 14, wherein the decision stage evaluates decision supporting information to determine which of the first and second decoding stages is suitable to decode the encoded data signal.

Claim 18. (Not Amended). The method of claim 14, wherein the decoding step further includes a storage stage in which the encoded data signal may be stored prior to the decoding by the first and second ^{decoding} encoding stages.

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Claim 19. (Amended) The method of claim 14, further comprising:
a first encoding stage which encodes data in conformity with a third encoding decoding method;
and
a second encoding stage which encodes data in conformity with a fourth encoding decoding method.

Claim 20. (Not Amended) The method of claim 19, wherein the third encoding decoding method is frequency shift keying (FSK) and the fourth encoding decoding method is phase shift keying (PSK).

21. (New) A data carrier comprising:
receiving means for receiving a modulated carrier signal which contains an encoded data signal,

demodulation means for demodulating the received modulated carrier signal and for outputting the encoded data signal contained therein,
decoding means for decoding the encoded data signal and for outputting data,
data processing means for processing the data output by the decoding means,
the decoding means including at least a first decoding stage and a second decoding stage, the first decoding stage being arranged to decode said data signal in conformity with a first decoding method while simultaneously the second decoding stage is arranged to decode said data signal in conformity with a second decoding method, and
a decision stage which is arranged to decide which of the first and second decoding stages is suitable to decode said data signal.

22. (New) A data carrier comprising:

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receiving means for receiving a modulated carrier signal which contains an encoded data signal,
demodulation means for demodulating the received modulated carrier signal and for outputting the encoded data signal contained therein,
decoding means for decoding the encoded data signal and for outputting data,
data processing means for processing the data output by the decoding means,
the decoding means including at least a first decoding stage and a second decoding stage, the first decoding stage being arranged to decode said data signal in conformity with a first decoding method while in parallel the second decoding stage is arranged to decode said data signal in conformity with a second decoding method, and
a decision stage which is arranged to decide which of the first and second decoding stages is suitable to decode said data signal.

23. (New) A data carrier comprising:

receiving means for receiving a modulated carrier signal which contains an encoded data signal,
demodulation means for demodulating the received modulated carrier signal and for outputting the encoded data signal contained therein,
decoding means for decoding the encoded data signal and for outputting data,

data processing means for processing the data output by the decoding means,
the decoding means including at least a first decoding stage and a second decoding stage, the
first decoding stage being arranged to decode said data signal in conformity with a first decoding
method while simultaneously the second decoding stage is arranged to decode said data signal in
conformity with a second decoding method, wherein said first decoding method is RTZ and said
second decoding method is Miller; and
a decision stage which is arranged to decide which of the first and second decoding stages is
suitable to decode said data signal.

24. (New) A data carrier comprising:

receiving device capable of receiving a modulated carrier signal which contains an encoded data
signal,

demodulation device configured to demodulate the received modulated carrier signal and outputs
the encoded data signal contained therein,

decoding device capable of decoding the encoded data signal and outputting data, said decoding
device including at least a first decoding stage and a second decoding stage, the first decoding
stage is arranged to decode said data signal in conformity with a first decoding method whereas
the second decoding stage is arranged to decode said data signal in conformity with a second
decoding method,

a decision stage which determines which of the first and second decoding stages is suitable to
decode the encoded data signal, and

data processing device configured to process the data output by the decoding device, wherein
once the decision stage applies decision information to the data processing device regarding
which of the first and second decoding stages is suitable to decode the encoded data signal, the
selected first or second decoding stage is used for processing the remainder of the encoded data
signal.

25. (New) The data carrier of claim 24, wherein the first decoding method is RTZ and the
second decoding method is Miller.